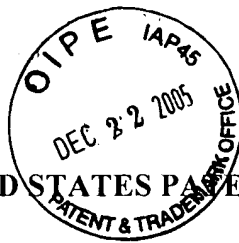


Docket No.: 043888-0337



PATENT

150

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Customer Number: 20277
Tetsuo NANNO, et al. : Confirmation Number: 2341
Application No.: 10/513,966 : Group Art Unit: 1723
Filed: November 10, 2004 : Examiner: Not yet assigned

For: METHOD FOR SEPARATING METAL-RESIN JOINT AND SEPARATING APPARATUS

SECOND REQUEST FOR CORRECTED FILING RECEIPT

Mail Stop OFR
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached is a copy of the Filing Receipt received from the U.S. Patent and Trademark Office in the above-referenced application. It is noted that the that **the number of independent claims is incorrect and the Assignee information is absent**. Attached is a copy of the listing of the claims, which evidences that **the number of independent claims should read: 3**. Also attached is the Assignment which evidences that **the Assignee information should read: MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.** It is requested that a corrected filing receipt be issued.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

Michael E. Fogarty
Registration No. 36,139

600 13th Street, N.W.
Washington, DC 20005-3096
Phone: 202.756.8000 MEF:sln
Facsimile: 202.756.8087
Date: December 22, 2005

**Please recognize our Customer No. 20277
as our correspondence address.**



CLAIMS

1. A method for separating a metal-resin joint comprising the steps of:
 - (1) immersing an article comprising a metal-resin joint with a counter electrode in an alkaline solution; and
 - (2) applying a voltage over a certain time period between the metal portion of said joint and said counter electrode such that the potential of said metal portion is lower than that of a standard hydrogen electrode.
2. The method for separating a metal-resin joint in accordance with claim 1, wherein the voltage is applied over a certain time period between the metal portion of said joint and said counter electrode such that the potential of said metal portion is -2 V or higher and -0.6 V or lower relative to the standard hydrogen electrode.
3. The method for separating a metal-resin joint in accordance with claim 1, wherein said alkaline solution has a hydroxide-ion concentration of 0.1 M or higher and 15 M or lower and contains alkali metal cations.
4. The method for separating a metal-resin joint in accordance with claim 1, wherein said alkaline solution has a hydroxide-ion concentration of 3 M or higher and 7 M or lower and contains alkali metal cations.
5. The method for separating a metal-resin joint in accordance with claim 1, wherein said alkaline solution has a

temperature of 0°C or higher and 80°C or lower.

6. The method for separating a metal-resin joint in accordance with claim 1, wherein said step (2) comprises applying ultrasonic vibration to said joint.

7. The method for separating a metal-resin joint in accordance with claim 1, wherein said step (2) comprises applying peeling stress to said joint.

8. The method for separating a metal-resin joint in accordance with claim 1, wherein said metal portion comprises one or more selected from the group consisting of Al, Ti, Cr, Mn, Fe, Co, Ni, Cu, Zn, Mo, Rh, Pd, Ag, Sn, Re, Os, Ir, Pt, Au, Hg and Pb.

9. The method for separating a metal-resin joint in accordance with claim 1, wherein the resin portion of said joint comprises one or more selected from the group consisting of polyolefin, polyamide, polyester, polyacetal, polycarbonate, polyarylene ether, polyarylene sulfide, polysulphone, polyether ketone, polyimide, fluorin-containing polymer, natural rubber, phenol resin, polyurethane, silicone resin, and epoxy resin.

10. The method for separating a metal-resin joint in accordance with claim 1, wherein said joint is formed by (i) application of a resin material to a metal article, (ii) injection molding of a resin material onto a metal article, or (iii) bonding of a metal and a resin material by vulcanization.

11. The method for separating a metal-resin joint in

accordance with claim 1, wherein the metal portion and the resin portion of said joint are bonded with an adhesive or adhesive tape, and said adhesive or adhesive tape comprises one or more selected from the group consisting of vinyl acetate resin, acrylic resin, synthetic rubber, nitrile rubber, epoxy resin, cyanoacrylate resin, and polyvinyl chloride resin.

12. A method for recycling a waste article comprising the steps of:

(1) collecting a waste article comprising a metal-resin joint;

(2) immersing said joint and a counter electrode in an alkaline solution;

(3) separating the resin portion from the metal portion by applying a voltage over a certain time period between the metal portion of said joint and said counter electrode such that the potential of said metal portion is lower than that of a standard hydrogen electrode; and

(4) segregating the separated resin portion and said waste article from which the resin portion has been separated.

13. An apparatus for separating a metal-resin joint comprising:

(a) a container made of an alkali-proof material for accommodating an article comprising a metal-resin joint;

(b) an alkaline solution contained in said container;

(c) a counter electrode immersed in said alkaline

solution;

(d) a power source;

(e) a connecting member A for electrically connecting one terminal of said power source with the metal portion of said joint of said article comprising the metal-resin joint; and

(f) a connecting member B for electrically connecting the other terminal of said power source with said counter electrode.

14. The apparatus for separating a metal-resin joint in accordance with claim 13, wherein said connecting member A comprises a conductive material, and a portion of said conductive material is coated with an insulating oxide layer.

15. The apparatus for separating a metal-resin joint in accordance with claim 14, wherein said insulating oxide layer is coated with an insulating resin layer.

Attorney Docket No.: _____

ASSIGNMENT

WHEREAS, Tetsuo NANNO and Yoichi IZUMI
hereinafter called the "Assignors," have jointly invented a new and useful invention entitled
METHOD FOR SEPARATING METAL-RESIN JOINT AND SEPARATING APPARATUS
for which they have:

- (a) filed an application for United States Letters Patent on
_____ as (Serial No. _____); or
- (b) executed an application for United States Letters Patent on
_____; or
- (c) filed a provisional application on _____
as (Serial No. _____); and

WHEREAS, Matsushita Electric Industrial Co., Ltd., a corporation organized and
existing under the laws of Japan, having a place of business at:
1006, Oaza-Kadoma, Kadoma-shi, Osaka 571-8501 Japan,
hereinafter called the "Assignee," is desirous of acquiring the entire right, title and
interest in and to said invention, the application above identified, and in, to and under
any Letters Patent which may be obtained to said invention, as hereinafter more fully
set forth;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, be it known that for and in
consideration of the sum of One Dollar (\$1.00), and other valuable and legally sufficient
considerations, the receipt of which by said Assignors from the said Assignee is hereby
acknowledged, the said Assignors have sold, assigned and transferred, and by these presents do
sell, assign and transfer unto the said Assignee, the entire, right, title and interest for the United
States in and to the invention and application hereinabove identified, and any Letters Patent of
the United States that may issue for said invention, together with the entire right, title and interest
in and to said invention and applications for Letters Patent and Letters Patent therefor, in all
countries foreign to the United States, including the full right to claim for any such application all
benefits and priority rights under any applicable convention; to have and to hold for the sole and
exclusive use and benefit of the said Assignee, its successors and assigns, to the full end of the
term or terms for which any and all of said Letters Patent for said inventions may issue.

And the said Assignors do hereby covenant and agree, for themselves and their legal representatives, that they will assist the said Assignee in the prosecution of the application herein identified; in the making and prosecution of any other applications for Letters Patent that the said Assignee may elect to make covering the invention herein identified, as hereinabove set forth; investing in the said Assignee like exclusive title in and to all such other applications and Letters Patent; and in the prosecution of any interference which may arise involving said invention, or any application or Letters Patent herein contemplated; and that they will execute and deliver to the said Assignee any and all additional papers which may be requested by the said Assignee to fully carry out the terms of this Assignment.

The undersigned hereby grant(s) the attorneys of McDermott, Will & Emery LLP the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

And the Commissioner of Patents and Trademarks is hereby authorized and requested to issue Letters Patent to the said Assignee in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, the said Assignors have hereunto set their hands and affixed their seal.

Date:
(Seal)

September 3, 2004

Tetsuo Nanno

Tetsuo NANNO

Date:
(Seal)

September 3, 2004

Yoichi Izumi

Yoichi IZUMI